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ABSTRACT

Despite the faith felt in 1965 in the power of educational research to effect immediate educational improvement, no sweeping reforms have resulted from research and development activities to date. This is partly due to lack of funds and to the fact that Schools of Education have emphasized their roles as socializers and distributors of credentials rather than as catalysts for change. Though educational research is carried out successfully by agencies other than universities, the latter, because of their contact with almost every aspect of society and their unequalled pool of scholarship and expertise, should remain at the heart of educational research and development. This paper is concerned with how the university can best fulfill its research function and discusses first, the importance of basic research; second, the characteristics and needs of mission-oriented research, which include an overall plan and commitment, team approaches to problemsolving, attention not only to actual problems but also to models and theories on the one hand and practical field testing on the other; and third, mission-oriented research in education and the need for cooperation and planning. (AF)

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Research Management: A University Position

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Throughout the university's evolution as one of the basic institutions of western civilization, certain fundamental aspects of it have remained stable while others have changed as society has. Martin Trow comments that until recently the university has addressed itself mainly to its traditional and autonomous functions, which are those which remain relatively stable and include the preservation and transmission of high culture, the shaping of the individual's psychological and intellectual development, the creation of new knowledge, and the issuance of social credentials.[1]

In the pragmatic American fashion, the university has become increasingly visible as an active agent in determining the shape and character of society at large. As Ralph Dungan, Chancellor for Higher Education of New Jersey, has expressed it, "in recent years the university has become part of the adaptive system of society and has assumed a more active role in determining the course that society will follow."[2] The very knowledge that is discovered, stored, permuted and created effects change, for knowledge alters people and therefore society, and society in turn alters the pressures and demands made on the university.

Since World War II, national government, in part in response to pressures of societal unease, has intensified its efforts to perfect an interface between institutions of higher learning and our national goals. In the case of education, the Elementary Secondary Education Act of 1965 was partially a recognition of the importance of educational research. The resulting training of researchers, support of individual and project research, and the creation of research and development centers were manifestations of a national concern for the improvement of public education.

Despite the faith felt in 1965 in the power of educational research to effect immediate educational improvement, the results have been,at least to the general education community, disillusioning. Reasons for this lack of development can be cited. Education as a field of study has been slow in establishing links with other basic disciplines and relatively ineffective in gathering resources from the primary agents for producing and applying knowledge. In Schools of Education in particular there has been an emphasis on the university's role as socializer and distributor of credentials rather than its function as catalyst for change within the individual and society.

The relatively bleak research picture in education and in educational research certainly should not surprise any thoughtful observer because, among other reasons, funds in amounts adequate to generate powerful forces for change have simply not been forthcoming. The federal budget for research education now, for example, is only three-tenths of one percent of the nation's entire budget for education. Ten percent of the defense budget, however, is devoted to research, five percent of the health budget, and four to five percent of the budget for business and industry.[3]

Or, to view the situation from another angle, from 1965 to 1968, the nine federally sponsored educational R & D centers received support of approximately $28 million. Just as a measure of the extreme modesty of this sum as the total support for nine centers over a four-year period, at my own university $8.2 million is being spent on a single item of scientific equipment, a cyclotron: a highly sophisticated item, admittedly, but the point is valid nevertheless; $28 million represents only a token commitment to the success and efficacy of these centers.

Therefore it is not surprising that no sweeping reforms have resulted from research and development activities to date, although considerable publicity has fostered the expectation that they would. This problem can be ameliorated if funds are available in sufficient amounts to multiply significantly the amount of contemporaneous university research activity underway. However, a most important point is that money -- even in overwhelming amounts -- will not purchase significant educational research and development. Later in the paper I will discuss those components which in my opinion must be combined with financial resources to produce meaningful educational research.

In spite of the fact that educational research is being carried out successfully and well by agencies other than universities, the university, because it is a vast, multi-faceted institution with a nerve center in contact with almost every aspect of society, should remain at the heart of educational research and development. Later I shall speak of the importance of interdisciplinary effort. I shall also speak of the importance of powerful models and theories to unite the efforts of these workers. Again, it is in the university where one finds the richest intellectual resources for formulating these models and theories.

In the university exists a pool of scholarship and expertise such as cannot be equalled or easily duplicated at any other institution. Universities, as perhaps no other institutions, have a large vested interest in the improvement of America's educational system, for the university's own clientele are the product of that system. "A first-rate university," remarks Peter Caws, "can only be the apex of a first-rate education system," and he goes on to estimate that the rest of the system taken collectively is about fourth-rate.[4]

Under these circumstances, obviously, one part of the system cannot flourish without a general reform throughout. The university -- and I am speaking here of the total institution, not merely that part of it devoted to the education of teachers -- has every reason to put full heart and energy into bringing about the best possible educational system on all levels and for all individuals throughout life.

I offer these points less as conclusive arguments than as facts of life, posited as preliminary to the rest of my discussion, which is not a defense of the university as a locus for educational research and development but an exploration into ways in which this function can be dispatched most effectively. My remarks will now be concerned, first, with basic research and then with the nature of mission-oriented research in the university, followed by a consideration of research and development

in the field of education.

The Importance of Basic Research

Basic research in education, which has been notably deficient up to the present, must be expanded into a major professional concern if schools of education are to develop beyond the level of trade schools. I have already noted the low level of funding, a weakness compounded by a pattern Swanson has pointed out. He notes, "in the field of education, research has only a fragment of a small proportion [of the responsibility of] those in academic teaching careers.... The consequences are huge gaps in fundamental knowledge about education and educational practice. This is a reflection of the recency of research in education and its low priority either as a national goal or as an obligation of the academic community."[5]

The fact that schools of education are limited in what they can accomplish in basic research, due partly to limited funds and partly to necessary emphasis on practical research, underscores the importance of their establishing ties (within their institution) with other disciplines which have achieved a considerable fundamental research base, particularly the biological and behavioral sciences. Close interdisciplinary academic contact is one of the education school's most valuable assets as part of the larger university complex.

Since its beginnings, the university's main business has been the cultivation of ideas. Mission-oriented research is viable only if its point of departure is securely based on fundamental research. To define the mission one must know the problems, and to know the problems one must conduct or be in touch with basic knowledge.

Mission-Oriented Research

Francis Chase has identified five characteristics essential to mission-oriented research: (1) key individuals within the research organization who are fully aware of and sympathetic to the principal goals of the organization (or institution) while working within a broad definition or the mission itself; (2) ready mobility between the fundamental research and its application as well as across disciplinary lines; (3) receptiveness to new ideas and readiness to act quickly on those judged sound and promising; (4) reasonable freedom for individual deployment and redeployment of resources; and (5) full communication of involved personnel throughout all stages of the R & D process, from original research through its ultimate applications.[6]

These characteristics suggest a picture quite different from the old stereotype of the lone researcher encapsulated in his laboratory and communicating with the pure essence of knowledge. Indeed, Chase goes on to say that "the essential character of research and development is in the reciprocal interactions of its component processes and in the interactions of the total R & D system with the particular systems it is designed to effect." A powerful system of R & D development for education requires many institutions and agencies. The importance of the university role is stressed by Chase when he states that universities

can codify knowledge, identify knowledge gaps, draw theoretical inferences, construct models, and design and test experimental procedures.[7]

Fitting the problem into a larger theoretical construct which can become the affair of a large and varied group of researchers, that is, abstracting from it a major problem field is one main concern of educational research. On the other side of the coin, the problem of translating research into development and application -- of making it concrete through practical application -- is equally urgent. Launor Carter has very usefully summarized a critique made by a team studying the development of a weapons system which might also be used as guidelines in evaluating the transition process in Educational R & D.

> "1. The transition from research to development to use is not a straight forward, orderly process....
>
> "2. There is usually a large time lag between initial discovery and practical application....
>
> "3. Communication in research and development tends to be informal and largely on a person-to-person basis....
>
> "4. Ideas are pushed through to application at the location at which ideas originate....
>
> "5. Strong leadership is essential, but an adaptive rather than authoritarian organizational environment is equally important...."[8]

These observations imply that such devices as organization charts, schedules, information circulars, and reports are likely to be much less impressive in practice than they are on paper. Strength of leadership in the sense of personal dynamics and the ability to communicate enthusiasm and commitment as well as information are important. Related to this type of leadership is the adaptive environment, by which the study team meant that "authority was not based on position in the hierarchy but on the expertise with regard to the task at hand. Critical decisions were not confined to the top but were diffused throughout the organization according to the ability of each person to contribute his knowledge or talent to the job toward which the organization was dedicated.[9]

Mission-oriented research, in summary, requires an overall plan and commitment, team approaches to problem solving, attention not only to actual problems themselves but also to models and theories on the one hand and practical field testing on the other, dynamic leadership, decentralized authority, and a communication flow which is not confined to channels. I shall now speak more specifically on mission-oriented research in the field of education.

Mission-Oriented Research in Education

Mission-oriented educational research will, inevitably, directly involve university people with groups outside the university setting -- the public schools, regional laboratories, and model cities programs, to name a few of the meeting grounds which provide a rich culture for the development of misunderstanding, mistrust, and misdirected efforts. It is not surprising that nonuniversity personnel would feel defensive at the presence in their "territory" of "experts" from another level of education whose legitimacy in terms of socially acknowledged credentials is greater than their own. One very unfortunate development in education today has been the professional separation of public school and higher education personnel, the latter frequently convinced that they are the true professionals while the former believe that they must labor in the fields while others reap the rewards of recognition, higher salaries and easier jobs, a conviction which is too often reinforced by poor communications.

In spite of certain friction between the public schools and university educators, there are developments in education today which require the cooperation of all educators for vigorous study. For example, significant policy decisions are being made regarding the governance and financing of schools, characteristically without adequate reference to theoretical models or experimentation. A further example is the fact that the lip service paid to the value of educational hardware vastly outweighs development and experimentation with such. Finally, many techniques, such as human relations training, whose potential surely interests anyone who has been concerned with teacher attitude, are being practiced without adequate, controlled experimentation.

Turning from what ought to be done to what is now taking place, we can view the nine federally sponsored university based centers as a major example of mission-research in education and as a tentative but positive thrust.

A very recent trend is occurring on many more campuses besides those which host the national centers, where individual researchers and research teams are also working on projects whose spin-off will eventually increase the composite research effort and information base in education. Across the nation, within the field and in conjunction with other disciplines, education faculties are making connections with outside agencies, including school districts, social agencies and independent laboratories, effecting cross-institutional collaboration in addition to interdisciplinary efforts within the institution.

A final point concerns the importance of planning for success in educational research and development, which extends into the planning for overall institutional development that should be a major factor in the determination of current research goals. It is to the institution's advantage to think of the research enterprise as something more than just another of the many units within the university. The major point to be made in this regard is that research funds in substantial amounts, particularly when allocated to projects involving several faculty members or inter-disciplinary effort, can be used to shape departmental

and institutional development. With informed awareness of possibilities and intelligent planning for results, the growth and development of a program could be telescoped, accomplishing in a few years what might require decades at established rates of institutional growth.

None of this is possible, however, neither the planning nor resulting institutional growth, unless adequate funds and reasonable freedom to deploy them are made available to researchers in education.

In a number of ways, the federal government has acted to stimulate and support research on the campus without strictly categorizing the funds made available. Historically, these non-categorical funds have been given to disciplines other than education, allowing them to develop a richer pool of resources for future arrangements. Until quite recently, on the other hand, funds for educational research have generally been marked when allocated, providing little flexibility for institutional development following natural growth patterns.

In conclusion, two points I wish to make are that we need be neither surprised nor discouraged by the shortcomings of educational research. We need not be surprised at them because we have viewed the funding problems both in terms of magnitude and flexibility, the slow-to-emerge tradition of scholarship, the lack of linkage between universities and other institutions, and lack of adequate planning. On the other hand we need not be discouraged because some of the more established disciplines with now firmly rooted traditions of research and scholarship went through similar experiences before realizing their present day status. Much more significantly, there is evidence in very recent times of movement in the direction of solutions of these problems of educational research and development in the university.

I believe, with Chase, that properly conceived, supported, and directed research and development can contribute both to continuous and cumulative improvement and to institutional reconstruction in education. I further believe that the university will play a key role in this endeavor.

REFERENCES

[1]Martin Trow, "Reflections on the Transition from Mass to Universal Higher Education," DAEDALUS: PROCEEDINGS OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES, Winter 1970, Vol. 99, No. 1, pp. 1-42.

[2]Ralph A. Dungan, "Higher Education: The Effort to Adjust," DAEDALUS: PROCEEDINGS OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES, Winter 1970, Vol 99, No. 1, pp. 141-153.

[3]James L. Gallagher, "Education Research Push," EDUCATION-TRAINING MARKET REPORT, January 30, 1970, Vol. 4, No. 3, p. 1.

[4]Peter J. Caws, "Design for a University," DAEDALUS: PROCEEDINGS OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES, Winter 1970, Vol. 99, No. 1, pp. 84-107.

[5]Gordon I. Swanson, "A Rationale for a National Research in Education," ORGANIZATION FOR RESEARCH AND DEVELOPMENT IN EDUCATION: PROCEEDINGS OF A CONFERENCE SPONSORED BY THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION AND PHI DELTA KAPPA, 1966, pp. 83-89.

[6]Frances S. Chase, "Education R & D: Promise or Mirage?" JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION, 1968, Vol 1, No. 4, pp. 3-14.

[7]Frances S. Chase, Ibid.

[8]Launor F. Carter, "From Research to Development to Use," ORGANIZATION FOR RESEARCH AND DEVELOPMENT IN EDUCATION: PROCEEDINGS OF A CONFERENCE SPONSORED BY THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION AND PHI DELTA KAPPA, 1966, pp. 43-44.

[9]Launor Carter, Ibid.